


HOT WORK PERMIT POLICY		
NYRSTAR CLARKSVILLE INC		
Department	Safety & Health	
		Document number TP - 563-00005

R-Indicates Revision

1. Purpose

The purpose of this policy is to ensure safe working practices are followed while undertaking hot work activities. This includes, but is not limited to welding, cutting, burning, grinding, and any related heat-producing jobs that could ignite combustible materials or flammable atmospheres.

2. Scope


This policy applies to all personnel working at the NCI facility.

3. References, Definitions

Definitions

Term	Definition
Hot Work	Any work which generates spark, flame and/or heat. Hot work includes, but is not limited to, welding, cutting, burning, grinding, and any related heat-producing jobs that could ignite combustible materials, flammable atmospheres or open unguarded sources of ignition. (The use of normal propane fired equipment associated with metal casting operations are exempted)
Designated Hot Work Area	Specific area designed or approved for hot work, such as maintenance shops or a detached outside location that is of non-combustible or fire resistant construction, essentially free of combustible and flammable contents and suitably segregated from adjacent areas.
Restricted Hot Work Area	Areas or situations where: <ul style="list-style-type: none"> - there is a presence/potential for presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air), or - explosive atmospheres may develop inside uncleaned or improperly prepared tanks or equipment which have previously contained such materials, or - accumulation of combustible dusts may develop or - any equipment which are part of the plant or areas near the storage of large quantities of exposed, readily ignitable materials, or

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	<ul style="list-style-type: none"> - adjacent to fuel gas or fuel oil systems, or - there are rubber lined equipment or conveyors. <p>Specific areas are the following; All zinc dust areas, Cadmium Plant, & Purification.</p>
General Areas	<p>Areas which are neither classified as Designated Hot Work area or as Restricted Hot Work area. When hot work has to be carried out in these areas a Pre Task Risk Assessment has to be completed.</p> <p>A Hot Work Permit shall be obtained while working anywhere outside Designated Hot Work areas. The permit is only valid for the task at hand. Any additional work requires that a new permit is to be issued.</p>
Hot Work Permit	An approved form of conditions and requirements that is signed, and given by an equipment owner to a person in charge of the Hot Work.
Fire Watch	Individual given the duty to observe the hot work operations area in order to identify and to respond quickly to a fire and try to extinguish it within the capacity of the fire extinguishing equipment available, or otherwise activate the emergency procedure.
Periodic Fire Monitoring	Periodic monitoring of an area where hot work has been conducted. Fire monitoring does not require a dedicated person, and may be shared among department personnel. Maximum interval of periodic monitoring cannot exceed 1 hour.

4. Requirements


NCI has implemented a site specific written procedure for Hot Work activities that complies with the requirements of the corporate standards and local regulations.

4.1 Training

All Nyrstar employees and contractors shall receive specific training about the Hot Work program according to two different levels of training. Contractors are to be made aware of the Hot Work requirements, but specific training is not provided or documented by NCI staff.

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4.1.1 Hot Work Operators & Fire Watch

All Nyrstar personnel who are authorized to perform hot work operations and fire watch duties shall receive specific training of the Site Hot Work Procedure. The training shall be documented and shall include the following items:

- Identification of Restricted Hot Work areas, which are identified by signs, or in specific Departmental Safety Rules
- Identification of hazards in and around the hot work areas
- Method of control of combustibles in the areas where hot work is being carried out
- Classes of fire; types and use of fire extinguishers

4.2 Hot Work Area Identification

NCI shall assess the workplace in order to identify and classify the area's risk level for Hot Work activities. These areas will be classified as: **Designated, Restricted** and **General**.

4.2.1 Designated Hot Work Areas

The Designated Hot Work areas shall be identified with signs reading "DESIGNATED HOT WORK AREA".

4.2.2 Restricted Hot Work Areas

The Restricted Hot Work areas shall be identified with signs. Prior to beginning work, personnel are to reference the Departmental Safety Rules. In **RESTRICTED HOT WORK AREAS**, HOT WORK PERMIT SHALL BE OBTAINED BEFORE CARRYING OUT ANY HOT WORK.


4.2.3 General Hot Work Areas

Areas which have neither been identified as designated or restricted hot work areas will be classified as "General Hot Work Areas" and no specific sign will be required.

4.3 Hot Work Permit

A Hot Work permit shall be required for all Hot Work Activities performed outside a Designated Hot Work area. The Hot Work Permit shall be in addition to the Safe Work Permit.

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A copy of the Hot Work permit shall be available at the location of the work being performed. The maximum duration should not be longer than one shift, after which a new permit will be required.

4.4 Fire Watch

A fire watch shall be assigned for any hot work in Restricted Hot Work Areas, and this function shall be maintained throughout the hot work operation including breaks / lunch and for 60 minutes continuously following the completion of hot work. A fire watch shall be posted and maintained in the immediate area of the hot work and in any adjacent areas that may be exposed by this operation. For General Hot Work Areas a fire watch shall be maintained for 30 minutes.

The fire watch has responsibility to make sure the hot work area is maintained in a fire-safe condition throughout this work and has the authority to stop the hot work if unsafe conditions are observed.

4.5 General Precautions Before Hot Work Activities


- PTRAs shall be completed to identify any combustibles, or unprotected openings into adjacent areas listed on the Hot Work Permit.
- Fire protection shall be visually inspected and verified to be in service before work is conducted.
- Hot Work equipment shall be inspected for any defects or damage.
- Personnel performing the Hot Work are equipped with all necessary personal protective equipment required for the Hot Work Activity.
- Remove ignitable / combustible material within a 35 foot radius of the hot work area when possible, or protected with fire resistant tarpaulins.

4.5.1 During Hot Work Activity

During the hot work activity, the following conditions/factors shall be observed;

- No combustible or flammable materials are introduced into the area
- The atmosphere is continuously monitored for any accumulation for flammable vapors, as determined by the PTRAs
- Fire resistant tarpaulins are used to cover any combustibles and electrical cables

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- The Fire Watch is always present during the work in Restricted and General Hot Work Areas
- If there is any change in the conditions identified in the permit, work shall be stopped and production personnel shall be informed

4.5.2 On Completion of Hot Work Activity

- In Restricted areas, a designated fire watch is required during the hot work and 60 minutes after completion of work for any potential fire. An additional periodic monitoring of the area will be conducted for a minimum of 3 hours
- In "General Areas" a designated fire watch is required during the hot work, 30 minutes after completion of work plus 30 minutes periodic monitoring

4.5.3 Elevated Hot Work

For any hot work operations on a building roof or adjacent to building walls where a combustible exposure exists within the structure, or the building has any combustible construction, a second fire watch should be posted in the exposed adjacent areas. For roof level hot work, a second fire watch should be posted on the floor immediately below for roof hot work as identified by the PTR process.

For elevated hot work, combustible materials should be either relocated a minimum of 35 feet from the hot work area or properly protected with fire resistant tarpaulins.

5. Records and Documentation

All completed Hot Work Permits are to be submitted to the Site Safety Department for review and retention in accordance with the Record Retention Matrix.

6. Audit and Review

R- This document will be reviewed every 12 months by the SHEQ Manager.

7. Accountabilities

R- The SHEQ Manager is accountable for this Policy.

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